

Nuclear, Medical and Environmental Technologies (CNMET)

U N I V E R S I T Y O F U T A H

CENTER

The commercial strategy of the **Center for Nuclear, Medical, and Environmental Technology (CNMET)** is to acquire selected spin-off facilities and consolidate existing niche markets into a single, well-managed and licensed entity that can provide a convenient source for a full range of nuclear services. Large companies are currently downsizing, outsourcing, and eliminating risky and costly nuclear research and development (R&D) capabilities, and are teaming with universities with established nuclear engineering programs and research facilities to perform key services. An additional market trend is for companies to off-load ownership and operation of their nuclear testing, diagnostic, and irradiation facilities, and to contract with new owners for specific access and services. Others are simply decommissioning their nuclear facilities without replacement. The result is a decrease in availability of licensed facilities. That, in combination with an increasing demand for services from the private sector, provides the basis for a solid commercial opportunity. E-Cubed and Nuclear Labyrinth will assume commercial production to reduce costs, implement uninterrupted production cycles, and achieve economies of scale. Appropriate R&D functions then will be merged and contracted to universities with nuclear facilities, such as the University of Utah's TRIGA reactor, to promote innovation, train co-operatively, and supply a steady stream of knowledgeable and seasoned potential employees to the workforce.

TECHNOLOGY

The operating entity for the University's research reactor and is primarily used for teaching, research, and limited fee-based irradiation services for external clients. Teaching and research activities include radiation chemistry and bioassays. Commercial services include ultra-sensitive fission track analysis (FTA), ultra-sensitive neutron induced autoradiography (NIA), advanced Pu diagnostics, high specific activity short-lived radioisotopes (for example, F-18), irradiation of unique medical "seeds" for cancer treatment, and performance testing of military electronic components and integrated systems upon exposure to neutrons. All intellectual property (IP) that results from CENTER activities is the property of the University and is licensed through the Technology Transfer Office (TTO).

E-Cubed: An independent entity that facilitates and integrates University reactor services with other intercollegiate and international reactors under research/grant programs administered by the DOE, NRC, and other related governmental agencies.

Nuclear Labyrinth: A newly formed company under CNMET that will engage in commercial nuclear production services beginning in January 2004. Nuclear Labyrinth will exclusively contract out all its research and development functions to the CENTER and license back applicable IP through the University's TTO. Together with the CENTER, Nuclear Labyrinth will provide valuable hands-on training functions for E-Cubed and its partners. Nuclear Labyrinth's marketing mission is to provide improved and expanded nuclear services to existing and underserved clients in the Western U.S. with nuclear production and testing needs.

1) **Little Mountain, Utah.** Boeing is currently in the process of closing its radiation facilities in California, and is a prime candidate to initially bring in

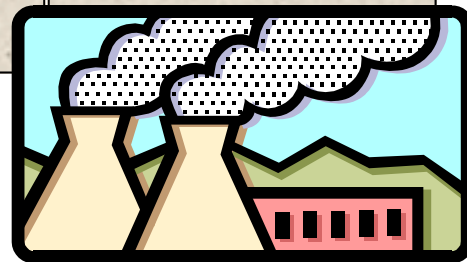
CNMET

commercial work displaced by the closing. Thus, a unique opportunity exists for Nuclear Labyrinth to contract with Little Mountain for increased civilian work. An initial estimate of at least \$1 million/year is estimated for non-defense work.

2) **Aerotest, Oakland, California.** Aerotest Corporation operates an explosives and jet engine neutron radiography business. During an earlier divestiture, the Autoliv-ASP company (originally based in Ogden, Utah) retained Aerotest (along with its nuclear reactor) as a stipulation to the spin-off transaction. AutoLiv now has indicated that it would like to divest itself of the reactor in part due to perceived operational risks and burdensome regulations required to conduct an operation that is outside of their core business. Nuclear Labyrinth is currently in negotiation to acquire the Oakland facility. If sale terms are reached and concluded, then Nuclear Labyrinth will assume full operational responsibility of the current reactor. Nuclear Labyrinth plans to convert the reactor's technology to all-digital format to significantly increase marketability of its commercial services.

ACCOMPLISHMENTS

Nuclear Labyrinth plans to contract with the CENTER on various research and development (R&D) projects, such as the digitization of Aerotest existing imaging technology and other R&D activities currently being conducted in Oakland. Segregation of R&D activities from scheduled production will dramatically increase capacity and efficiency at the Aerotest facility. Nuclear Labyrinth may contract with the CENTER to develop rapid bioassay techniques. If perfected, this new technology would greatly expand Utah market opportunities with commercial entities such as Envirocare. Nuclear Labyrinth intends to conduct targeted market research to identify and approach other potential underserved clients. Future contracts with the CENTER to develop new technologies shall be licensed back to the University via TTO.



THINK TANK

What if there was...

David M. Slaughter
University of Utah
50 S Central Campus Dr.
SLC, UT 84112
801-581-8499
slaughter@
nuclear.utah.edu